Chapter 4

4. AIR QUALITY

4.1 GENERAL

Federal and state laws regulate air pollution emissions from NASA Langley Research Center facilities and operations. The Clean Air Act of 1970 and its Amendments of 1990 set forth the requirements for air quality control programs. The objective of air quality control programs is "to protect and enhance the quality of the Nation's air resources so as to promote public health and welfare and the productive capacity of its population." The U.S. Environmental Protection Agency has granted the Commonwealth of Virginia Department of Environmental Quality (VDEQ) authority for oversight and enforcement of Clean Air Act provisions.

4.2 REQUIREMENTS

4.2.1 NASA Langley Research Center Air Operating Permit

The Center has a federally enforceable state operating permit for its stationary sources of air pollution. The permit limits emissions from specific sources of air pollutants as well as Centerwide air pollutant emissions. It also specifies operating, monitoring, and record-keeping requirements. A list of facilities regulated under the air permit is available from the EMO.

4.2.2 Compliance Requirements of the Air Operating Permit

The air permit is designed to limit the amount of air pollution that NASA LaRC facilities and operations may emit. Specific permit requirements vary according to the air pollution source, but they generally fall into four categories:

Physical:
- Controls to limit emissions such as low NOx burners on boilers and filters on paint booths.
- Monitoring equipment to measure emissions or process rates.

Operational:
- Limits on the amount of fuel burned or materials processed.
- Limits on frequency and duration of operations.
- Limits on the types and amounts of product that can be used, such as paints and solvents.

Record Keeping:
- Document that physical and operational requirements are met.
- Quantity of products, fuel, and materials used.
- Log the frequency and duration of operations.

Reporting and Inspections:
- Monthly and Quarterly Reports.

- Annual Inventory and Emissions Statement.
- Annual Inspections by VDEQ.

4.3 RESPONSIBILITIES

4.3.1 Environmental Management Office (EMO)

- Monitor and report all air emissions and prepare all permit applications as required by regulatory agencies.
- Serve as the point of contact for LaRC for regulatory agencies.
- Obtain emission inventories and prepare summary reports.

4.3.2 Facility Environmental Coordinators (FEC's)

- Know the facilities and operations in their areas of responsibility that are, or have the potential to be, sources of air pollution.
- Be familiar with the permitted sources of air pollution and the permit requirements for those sources.
- Notify the EMO prior to moving, changing or installing a potential air source at his/her facility.
- Consult with the EMO to evaluate operations of concern and to ensure compliance with air pollution regulations and permit requirements.
- Provide the EMO with information related to permit conditions. FEC's shall also provide data as required by the permit to the EMO in a timely manner for air emissions monitoring and inventory.

Whenever possible, sources of air pollution shall be minimized or eliminated through use of feasible engineering and administrative controls. Substitution of nonpolluting materials shall be considered.

4.3.3 Supervisory Personnel and Individual Employees

- Ensure that employees under their direction are aware of the air permit requirements and emissions limits.
- Assist FEC's with the preparation of the required information for permit conditions, monthly monitoring, and annual updates.
- All employees are responsible for ensuring that unpermitted emissions do not occur.

4.3.4 Office of Logistics Management (OLM)

- Provide the EMO with monthly reports on the amount and type of chemicals and the quantity of fuel issued from stock. Reports for the previous month will be provided to the EMO in a timely manner, but not later than five working days into the new month.

Chapter 5

5. HAZARDOUS WASTE MANAGEMENT & MINIMIZATION

5.1 GENERAL

This Chapter provides information and procedures to LaRC personnel and on-site contractors regarding the proper management of hazardous waste (HW) at the Center. The procedures comply with the many rules and regulations that have been established by the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the LaRC Environmental Management Office (EMO), and the Virginia Department of Environmental Quality (DEQ). The goal of the HW regulations and the environmental regulators is to ensure the health and safety of humans and the environment.

5.2 REQUIREMENTS

The Center is subject to HW regulations since LaRC facilities and personnel can each be considered an actual or potential generator of HW. LaRC is not authorized to transport HW off site, store HW beyond a 90-day accumulation period, or dispose of HW on site. These functions can only be performed by appropriately permitted contractors.

Hazardous waste is any material that is abandoned, discarded, recycled or inherently waste-like and has:

- Characteristics of hazardous waste listed by the EPA (List of Hazardous Materials identified in 40 CFR 261, Subpart D).
- Any characteristics of ignitability, corrosivity, reactivity, or toxicity defined by the EPA in 40 CFR 261, Subpart C.
- A potential of causing damage to health or the environment if disposed of improperly or if a spill occurs.

All LaRC personnel and on-site contractors who handle or oversee the handling of HW are required to follow the procedures outlined in this Chapter to ensure that LaRC complies with all applicable HW management regulations.

5.3 SATELLITE ACCUMULATION AREA MANAGEMENT

- Definition - A Satellite Accumulation Area (SAA) is a specific location at a facility that is designated to accumulate HW (yellow label).
- Custodian / Generator - Any person who oversees or manages a SAA, or who generates and accumulates HW at a SAA.
- Location - SAA's must be located at or near the point of waste generation and be under the control of the operator of the process generating the waste. HW from one SAA may not be moved to another SAA.

- Quantity – No more than 55 gallons TOTAL of HW or one quart of acute HW can be accumulated at a SAA. Full containers, regardless of size, must be disposed of within 3 days.

  Acute wastes are specifically listed by the EPA. A copy of the list is available by calling the EMO at extension 44232.

- Labeling - Each HW container located at a SAA must be marked with the words “Hazardous Waste” (yellow label) and the identity of the waste.

  NOTE: The Accumulation Start Date on the HW label does not get filled in until the container is FULL or the 55-gallon limit of HW is reached.

- Container Management - Each container at a SAA must be closed at all times (unless adding waste), non-leaking, and compatible with the waste. Leave headroom to allow for expansion (3 inches for 55-gallon drum, 1-inch for 5 gallon).

- Inspection – SAA inspections must be performed weekly and documented. An example inspection sheet is available at: http://osemant1.larc.nasa.gov/cmts/hazwaste/

- Spill Response – A one-page Spill Plan must be posted at each SAA and, where appropriate, there must be adequate spill supplies to clean up small spills or contain large spills (Facilities must purchase their own supplies). A facility-specific Spill Plan can be generated at: http://osemant1.larc.nasa.gov/cmts/hazwaste/.

- Disposal – A HW container must be removed from a SAA in 3 days when the 55-gallon limit is reached or the container is full. The Accumulation Start Date starts the 3-day clock. (See Section 5.5 for disposal guidelines).

5.3.1 Training

All personnel who handle HW or who oversee the accumulation of HW in their facility must have training on HW management procedures that are relevant to the position in which they are employed or tasks they are performing. The training must also include emergency response procedures and familiarization with equipment and systems where applicable.

NOTE: Training must be updated at least annually and whenever new or different hazards are introduced into the workplace. Proof of training (e.g., sign in sheet) must be kept on file by the FEC.

5.4 RESPONSIBILITIES

5.4.1 Facility Personnel and On-Site Contractors

- Follow the management and disposal procedures outlined in this chapter.

- Receive HW management training at least annually if you handle or oversee the handling of HW.

- Follow the Spill Plan procedures in the event of a small spill/ leak of HW. In the event of a large spill, immediately notify the FEC. No action should be taken which would endanger personnel.

- Contact the EMO at least two weeks before starting work on large waste-generating projects (e.g. lead paint removal, wash-down of tunnel walls). Failure to do so could result in work stoppage or additional costs.

5.4.2 Facility Environmental Coordinators (FEC's)

- Notify the EMO at extension 44232 prior to establishing or modifying a SAA in his/her facility.

- Implement SAA management procedures according to Section 5.3 and ensure that the Spill Plan is posted and weekly inspections are performed and maintained. Suggested inspection sheets and spill plans are available at: http://osemant1.larc.nasa.gov/cmts/hazwaste/.

- Ensure that his/her facility personnel follow the waste management and disposal procedures outlined in this chapter.

- Review and sign only complete Waste Material Data Sheets (WMDS) disposal forms.

- Ensure all personnel who handle or oversee the handling of HW obtain annual training and maintain training files.

- Update his/her facility chemical inventory using the CMTS according to the specifications in Chapter 19, Hazardous Materials Inventories.

- Perform other duties as specified in LAPD 8800.1, “LaRC Environmental Compliance, Restoration, and Pollution Prevention Program.”

5.4.3 The Environmental Management Office (EMO)

- Oversee the Center’s hazardous waste management operations.

- Review Transfer, Storage and Disposal Facility audit information.

- Prepare the HW Minimization and HW Generator Reports.

- Issue labeled waste accumulation containers and remove full hazardous waste containers within 72-hours of notification by the generator.

- Dispose of waste through a qualified off-site contractor in accordance with all Federal, State and local requirements.

- Provide periodic HW Management training to FEC’s and facility personnel.

- Perform multimedia environmental audits of Center facilities to evaluate waste generation practices.

5.5 WASTE MANAGEMENT AND DISPOSAL PROCEDURES

The following procedures must be followed by any generator of waste at LaRC including all personnel, facilities, and on-site contractors.

5.5.1 Waste Accumulation Containers

- Pre-labeled drums/containers with an identification number are issued by the EMO. The drums must stay at that facility and contain only the waste for which they were issued. *Liquid and solid wastes should not be mixed.*

- Facilities may use their own small containers (less than a 5 gallon pail) to accumulate small quantities of waste. The containers must be compatible with the waste, properly labeled, and contain only the waste identified on the label.

NOTE: REUSE OF PRODUCT DRUMS IS PROHIBITED. Call 5-DRUM to turn in empty product drums and request a properly labeled accumulation drum.

5.5.2 Disposal Procedures

The Generator or Custodian of the waste is responsible for proper disposal.

- Labels – Fill in the Accumulation Start Date when the HW container is FULL (this starts the 3-day clock to have the container removed from the SAA). (Anticipate the container fill date and complete forms ahead of time to ensure compliance).

- Forms – Complete all information in Part 1 of LF163, "Waste Material Data Sheet." Currently, these forms are only available through the EMO. FEC signature and organization code is mandatory and a MSDS should also be attached. USE ONE FORM per type of waste (various sizes of the same waste type can go on one form).

- Approval – Send WMDS forms to "Hazwaste" at MS 477 or hand deliver to B1183, room 111. Incomplete forms will be returned to the generator.

5.6 TYPICAL WASTES AND EXCEPTIONS

5.6.1 Typical Wastes

Follow the procedures outlined in Section 5.5 for proper management and disposal of the following types of wastes:

Acids / caustics	Any paints	Oil / lubricants
Adhesives	Light ballasts	Oily rags and water
Antifreeze	Mercury switches	Cylinders
Photographic fluids	Fuels	Small capacitors
Spill debris	Solvents	Used paint cans

NOTE: Trash disposal of such items is prohibited.

5.6.2 Universal Waste

Recent changes have been made to regulations regarding the management of *batteries* and *fluorescent light bul*bs. The changes are:

- They can now be labeled with a "Universal Waste" label (purple label).
- The start date is filled in when the waste *begins to be accumulated* (as opposed to the HW requirements of when the container is full).
- They can be accumulated for up to one year, at which point they must be shipped off site for disposal. In order for LaRC to meet this requirement, generators must have their batteries or bulbs picked up within 270 days of the start date to allow the Environmental Office sufficient time to ship them off site for disposal.

Aside from these changes, all other SAA management requirements still apply for Universal Wastes (e.g. annual training, drums closed and labeled).

5.6.3 Exceptions

Forms are NOT required to dispose of small batteries, lightbulbs and aerosol cans. See below for disposal procedures. Call extension 5-DRUM for pickup or use electronic request at: http://osemant1.larc.nasa.gov/envcord/ref/Hazwaste/bflac2.htm

- Batteries

Most batteries contain corrosive or caustic materials, and/or toxic metals, such as mercury, cadmium, and lithium. Any type of small battery (e.g., alkaline, lithium, ni-cd) must be accumulated in separate **non-metallic** containers labeled with a "Universal Waste" (purple) label. Refer to Section 5.6.2, Universal Waste for labeling and accumulation procedures. Disposal forms are not required to turn in batteries for disposal. Generators may request pickup electronically at: http://osemant1.larc.nasa.gov/cmts/hazwaste/.

NOTE: All terminals must be taped to prevent fire/sparks. (Forms must be submitted for large lead-acid and unusual batteries).

- Fluorescent Light Bulbs (FLB's)

Most FLB's are subject to regulation because they contain a small amount of mercury. All FLB's at LaRC must be accumulated and properly disposed of. In most cases, the LaRC lighting contractor will replace FLB's at Center facilities.

NOTE: Facilities that change their own bulbs must accumulate them in their original box (to prevent breakage) and label "Universal Waste." Refer to Section 5.6.2, Universal Waste for proper labeling and accumulation procedures. Disposal forms are not required to turn in bulbs for disposal. Generators may request pickup electronically at: http://osemant1.larc.nasa.gov/cmts/hazwaste/.

- Aerosol or Paint Spray Cans

Full or partially full aerosol cans are considered hazardous waste and must be placed in a labeled (yellow HW label) accumulation container and managed in accordance with Section 5.5. Disposal forms are not required to turn in aerosol cans for disposal. Generators may request pickup electronically at: http://osemant1.larc.nasa.gov/cmts/hazwaste/.

The State of Virginia allows for *completely empty* aerosol cans to be accumulated as nonhazardous waste which is exempt from SAA management requirements. Facilities must receive approval from the EMO at extension 44232 prior to accumulating their aerosols as nonhazardous.

NOTE: placing a full or partially full aerosol can into a nonhazardous accumulation container could result in a notice of violation and/or fine.

5.7 RESOURCES / ELECTRONIC TEMPLATES

- **Waste Pickup and SAA guidance:**: request pickup of batteries, lightbulbs and aerosol cans, generate SAA Spill Plans and inspection sheets at: http://osemant1.larc.nasa.gov/cmts/hazwaste/

- **Chemical Material Tracking System** - FEC's can update their chemical inventories at: http://osemant1.larc.nasa.gov/cmts/

5.8 HAZARDOUS WASTE MINIMIZATION

Waste minimization is required by the EPA. LaRC's policy is to minimize the volume and toxicity of wastes generated at the Center. Source reduction, reuse, and recycling shall be utilized whenever possible. Additional information on waste minimization concepts can be found in Chapter 18, Pollution Prevention.

5.8.1 Responsibilities

5.8.1.1 Facility Personnel and On-Site Contractors

- Purchase only what is expected to be used when ordering hazardous materials and determine if a less hazardous material can be used.

- Review operations to assure that they are conducted efficiently, reducing hazardous material use whenever possible.

- Utilize the Center's Reuse Facility (call extension 48058) whenever possible.

- Follow proper waste segregation practices.

5.8.1.2 Facility Environmental Coordinators (FEC's)

- Assist facility personnel in minimizing hazardous waste.

5.8.1.3 The Environmental Management Office (EMO)

- Send a HW Minimization Report by April 31st of each year to the respective Organizational Unit Managers (OUM's). (The report provides a detailed list of all waste streams that have been disposed of by the Organization during the past calendar year. The report may also include recommendations from the EMO.)

5.8.1.4 LaRC Offices and Organizational Units

- Review the HW Minimization Report and implement, where feasible, minimization procedures that will reduce their hazardous waste.

- Submit a response to the EMO by June 31st if recommendations from the EMO are included in the report.

- Request assistance from the EMO to initiate minimization plans and procedures at their facilities.

Chapter 6

6. POLYCHORINATED BIPHENYL (PCB) MANAGMENT

6.1 GENERAL

This chapter provides information regarding Polychlorinated Biphenyls (PCB's) and PCB containing equipment. It also outlines LaRC procedures for proper identification, management, and disposal of PCB and non-PCB items.

PCB's are a class of chlorinated hydrocarbons that were developed in 1929 and used in a variety of applications because of their chemical stability, low flammability, and low electrical conductivity. Use as a coolant in transformers, capacitors, and ballasts has been a major application. PCB fluids have been sold under various trade names, such as "Askeral," "Inerteen", "Chlorexol," "Noflama," and "Pyranol." Because of their extreme stability, they do not break down in the environment and tend to biomagnify through the food chain. Manufacturing of PCB's in the United States was discontinued in 1977.

6.2 REQUIREMENTS

PCB's are regulated under the EPA's Toxic Substance Control Act (TSCA). The regulations include procedures for proper labeling, storage, use, servicing, decontamination, and disposal of all fluids containing greater than 50 parts per million (ppm) PCB's; electrical equipment containing such fluids; and cleanup debris from spillage or leakage of such fluids. Items containing fluids that are less than 50 ppm PCB are considered non-PCB and are excluded from federal regulations with the exception of disposal practices.

Some facilities at the Center may still have PCB light ballasts or capacitors that have high levels of PCB's, or older electrical equipment that have very low levels of PCB's. Access to areas containing large high voltage PCB capacitors (2,000 volts or greater) must be posted with a large sign. All PCB storage areas must also be posted. A list of items that require labeling can be obtained by calling the EMO at extension 43500.

6.3 RESPONSIBILITIES

All LaRC and contractor personnel involved in the maintenance, use, and disposal of PCB items must follow the procedures in this section to assure compliance.

6.3.1 Custodian / Operator

Facilities System personnel shall serve as custodian or operator and perform the duties listed below. In the event that PCB items at a facility are not operated and maintained by Facilities System personnel, the Facility Environmental Coordinator (FEC) shall perform these duties:

- Label and post signs on each PCB item and area located at their facility. A list of items that require labeling can be obtained by calling the EMO at extension 43500.
- Periodically inspect transformers and large capacitors for leaks and proper storage.

- Contact the EMO for the following:
- Sampling of possible PCB items located at their facility. Call extension 43394.
- Procedures for removing any PCB items for disposal. Call extension 44232.
- In the event of a PCB spill call the EMO PCB Spill Coordinator at extension 43320.

6.3.2 The Environmental Management Office (EMO)

- Provide PCB labels and signs to LaRC operators and custodians.
- In the event of a spill, serve as PCB Spill Coordinator and follow the procedures outlined in the LaRC PCB Management and SPCC Plan.
- Review/approve disposal requests and sign PCB shipping documents.
- Approve or reject the use of PCB disposal facilities.

6.3.3 Environmental Support Contractor

- Manage the Center's PCB Storage Facility, Facility 1167 in accordance with LaRC waste management and TSCA requirements.
- Inspect all PCB items to ensure proper labeling and packaging prior to being placed in storage in Facility 1167.
- Perform sampling and analyses of PCB items as needed.
- Prepare manifests in accordance with 40 CFR 761.209, submit to the EMO at least three days prior to PCB shipment, and maintain disposal files.
- In the event of a spill, follow the procedures outlined in the LaRC PCB Management and Spill Prevention, Control and Countermeasure Plan.

6.3.4 PCB Removal Operations

- Notify the EMO prior to work involving the removal of PCB items.
- Conduct all PCB operations in accordance with applicable provisions of CFR 40 Part 761, Subparts A through K.
- Temporarily store PCB items (transformers, capacitors, etc.), for a period of time, not to exceed 30 days, from the date of removal from service. Storage shall be in accordance with EPA regulations CFR 40 Part 761.65 and coordinated with the EMO to assure proper storage practices. A notation shall be attached to the PCB item or PCB container housing which indicates the date of removal from service, its weight, and PCB ppm content.
- Package all PCB items for transportation according to applicable DOT regulations.

NOTE: All PCB transformers and PCB contaminated electrical equipment that have fluids containing any concentration of PCB's must be drained before being transported off the Center for disposal. The only exception to this is transformers or capacitors that can be contained without modification in a drum or other leak proof container. The EMO must be notified prior to draining any equipment to ensure that proper accumulation containers are used.

- Market oil containing greater than 2 ppm PCB's to incinerators or burners defined in 40 CFR Part 761.20 (e) (1) or an EPA approved chemical treatment facility.

- At least five working days prior to transporting any PCB items off LaRC property, the following information must be submitted to the EMO:

    1. Name and location of the ultimate disposal facility. Only NASA LaRC approved facilities may be used for the disposal of PCB items. Disposal shall be in accordance with CFR 40 Part 761, Subpart D.

    2. A completed manifest that fulfills all requirements of CFR 40 Part 761.207 and CFR 40 Part 761.208. The EMO will review the manifest prior to approval and signature.

In the event of a spill:

1. Immediately notify the LaRC PCB Spill Coordinator at extension 43500. During non-working hours, notify the Duty Officer at extension 44927).

2. Perform cleanup as required under CFR 40 Part 761, Subpart G.

All personnel, including supervisors involved with spill prevention and cleanup, shall be trained in accordance with Federal/State regulations.

Materials required under the Emergency Spill Plan as provided by the removal personnel and approved by the EMO shall be maintained and kept on hand at the site during the entire PCB operation. No PCB site operations shall be performed unless these items and qualified personnel are present at the site.

Chapter 7

7. ENVIRONMENTAL PERMITS, AUDITS AND ALERTS

7.1 ENVIRONMENTAL PERMITS

7.1.1 Requirements

LaRC has the responsibility to ensure compliance with all Federal, State, and local permits and notices required for environmental pollution control and waste processing. LaRC must apply for permits in a timely manner and coordinate its efforts with all affected agencies. Examples include: permits for discharge to surface waters, discharge to sanitary sewers, landfill, dredge and fill operations, asbestos removal, underground storage tank modifications, new air emissions sources and activities in wetlands.

A permit is required for each specific source of discharge of effluents onto the land or into the air and water. Separate applications are submitted to the various State regulatory agencies, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency (EPA), or other persons or agencies appropriate for each permit.

The permits currently in effect that govern operations at LaRC are discussed in Chapters 3 and 4 of this manual.

7.1.2 Permit Checklist

The Permit Checklist, Figure 7-1, was developed to assist personnel initiating actions or projects at LaRC to determine if an environmental permit is required. Personnel initiating projects shall complete the checklist prior to project development. Any action marked “yes” must be coordinated with the EMO.

7.2 RESPONSIBILITIES

7.2.1 Environmental Management Office (EMO)

- Validate the need for permit applications, revisions, and renewals.
- Prepare and/or review all environmental permit applications.
- Determine the need for notices or other documentation to comply with Federal, State and local laws and regulations.
- When applicable, review construction permits, initial operating permits, process notices and other documentation to ensure adherence to pollution control and disposal regulations.
- Maintain copies of the environmental permits discussed in Chapters 3 and 4 and apply for renewal or modifications.

7.2.2 Facilities and Equipment Support Service (FESS)

- Provide input for all required permits and notices.
- Ensure necessary permits are obtained prior to construction of facilities.

- Complete Environmental Permit Checklist, Figure 7-1.
- Coordinate permit requirements with the EMO.

7.2.3 Personnel serving as the Heads of Research & Technology Competency Areas, Program Offices or Business Management Offices

- Ensure research operations are conducted in accordance with permitting requirements.

7.3 AUDITS and INSPECTIONS

LaRC undergoes a number of audits and inspections on a recurring basis. All on-site regulatory agency reviews shall be coordinated through the EMO at extension 43500. On-site visits may require interfacing with other Center organizations. The EMO will attempt to ensure that audits and inspections are coordinated with minimum impact on Center operations.

7.3.1 External Audits

The following table shows audits conducted at LaRC by regulatory agencies on a regular basis. Regulatory agencies can conduct interim audits anytime at their discretion.

Table 7-1
RECURRING AUDITS AT NASA LaRC

AGENCY	AUDIT FOCUS	FREQUENCY
Hampton Roads Sanitation District (HRSD)	Industrial	Semi-Annually
Virginia Dept. of Environmental Quality (VDEQ) Water Office	Water	Annually
VDEQ Waste Operations Office	Hazardous waste	Annually
VDEQ Air Office	Air emissions	Annually

7.3.2 Internal Assessments

The EMO will conduct, on a continuing basis, multi-media environmental assessments of LaRC facilities to ensure the facilities and their operations are in compliance with Federal, State and local regulations, as well as with the Center's environmental policies. Assessment results will be documented to include environmental violations and/or concerns and recommended methods of correction. The EMO will forward this document to the Facility Environmental Coordinator (FEC) for action, if necessary.

7.4 ENVIRONMENTAL ALERTS

There are occasions when information affecting environmental compliance matters at the Center must be communicated to all personnel. This information will be published in the form of an Environmental Alert (Example shown in Figure 7-2).

Electronic copies of all environmental alerts can be found at the EMO web site at: http://osemant1.larc.nasa.gov/alerts/.

Figure 7-1
ENVIRONMENTAL PERMIT CHECKLIST

PROJECT NAME:

_____

_____

Does the proposed action include or involve:

YES* NO

___ ___ Discharge of any substances into the air;

- Construction and operation air permit

___ ___ Discharge of any substances into surface waters;

- Construction and operation water discharge permit for industrial wastes (or for domestic wastes for sewage treatment plants)

- Virginia Pollutant Discharge Elimination System permit if the discharge is into navigable waters

___ ___ Discharge of any substances into ground waters;

- Permit for discharge of industrial waste (or domestic waste)

- Ground water monitoring plan

___ ___ Construction/modification of a sewage treatment facility, including collection/transmission lines

- Sewage treatment/facility modification permit

___ ___ Any construction activities in wetlands or in existing outfalls;

- Construction or fill and dredge permit.

Other Requirements:

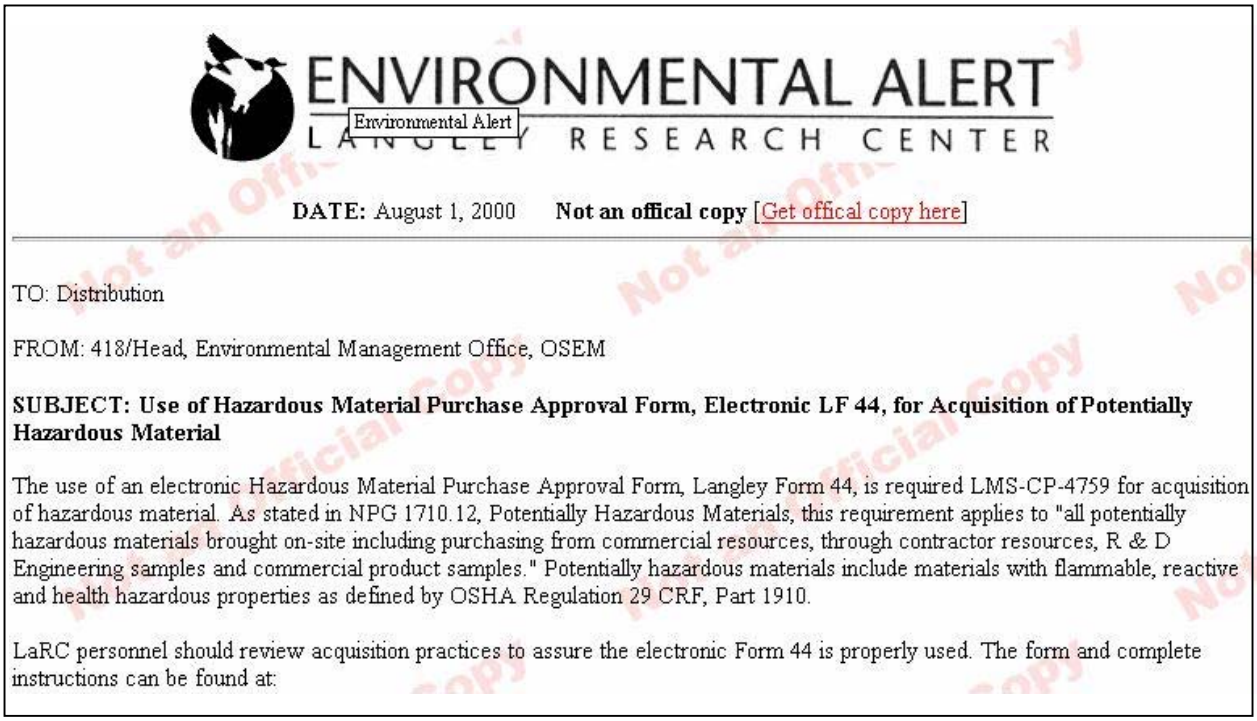
___ ___ Use of underground storage tank for any substance other than potable water;

- State Water Control Board notification

- Ground water monitoring plan/underground storage tank leak detection

*** Any item marked "yes" must be coordinated with EMO at extension 43500.**

Figure 7-2
ENVIRONMENTAL ALERT (PARTIAL)



ENVIRONMENTAL ALERT
Environmental Alert
LANGLEY RESEARCH CENTER

DATE: August 1, 2000 **Not an offical copy** [Get offical copy here]

TO: Distribution

FROM: 418/Head, Environmental Management Office, OSEM

SUBJECT: Use of Hazardous Material Purchase Approval Form, Electronic LF 44, for Acquisition of Potentially Hazardous Material

The use of an electronic Hazardous Material Purchase Approval Form, Langley Form 44, is required LMS-CP-4759 for acquisition of hazardous material. As stated in NPG 1710.12, Potentially Hazardous Materials, this requirement applies to "all potentially hazardous materials brought on-site including purchasing from commercial resources, through contractor resources, R & D Engineering samples and commercial product samples." Potentially hazardous materials include materials with flammable, reactive and health hazardous properties as defined by OSHA Regulation 29 CRF, Part 1910.

LaRC personnel should review acquisition practices to assure the electronic Form 44 is properly used. The form and complete instructions can be found at:

Continue to Next Section